

Amendments to the Specification:

Please amend the specification according to the following:

[0048] A relative amount of each type of fiber can vary depending on the desired physical characteristics of the composite core. For example, fibers having a higher modulus of elasticity enable formation of a high strength and high-stiffness composite core. As an example, carbon fibers have a modulus of elasticity from 15 Msi and up, but more preferably, from about 22 Msi to about 37 Msi; glass fibers are considered low modulus fibers having a modulus of elasticity from 3 Msi and up, ~~but more preferably, from about 6 Msi to about 7 Msi.~~ As one skilled in the art will recognize, other fibers may be chosen that can achieve the desired physical properties for the composite core.

[0066] As another example of the composite core, it may be feasible to make a composite core comprising interspersed high modulus of elasticity fibers and low modulus of elasticity fibers. Depending on the strain to failure ratio, this type of core may be a single section or layer of hybridized composite or it may be formed in several sections of single fiber composite. Carbon fibers can be selected for their high modulus of elasticity within the range of about 22 Msi to about 37 Msi, a low coefficient of thermal expansion within the range of about  $-0.7 \times 10^{-6}$  m/m/ $^{\circ}$  C to about 0 m/m/ $^{\circ}$  C, and an elongation percent within the range of about 1.5% to about 3%. Glass fibers are selected for a low modulus of elasticity ~~within the range of about 6 Msi to about 7 Msi,~~ a low coefficient of thermal expansion within the range of about  $5 \times 10^{-6}$  m/m/ $^{\circ}$  C to about  $10 \times 10^{-6}$  m/m/ $^{\circ}$  C, and an elongation percent within the range of about 3% to about 6%. The strain capability of this exemplary composite is a function of the inherent physical properties of the components and the volume fraction of components. In accordance with the present invention, the resins can be customized to achieve certain properties for processing and to achieve desired physical properties in the end product. As such, the fiber and customized resin

strain to failure ratio can be determined. For example, carbon fiber and epoxy has a strain to failure ratio of 2.1% and glass fiber and epoxy has a strain to failure ratio of 1.7%. Accordingly, the composite core can be designed to have the stiffness of the carbon fiber and epoxy and the flexibility of the glass fiber and epoxy. This combination of fibers and resin can create a composite core that is flexible and has a low coefficient of thermal expansion.